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# TWO YEAR REPORT DOCUMENTING COMPLIANCE WITH THE PREVENTATIVE MAINTENANCE PLAN

# PARDEEVILLE ELECTRIC UTILITY

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Electric Division

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This report format was prepared by the MEUW work group for PSC Rule 113.0607 for use by the 82 municipal electric utilities in Wisconsin and endorsed by PSC staff as meeting the requirements of Rule PSC 113.0607.

I Reporting Requirements: PSC 113.0607(6) states;

Each utility shall provide a periodic report to the commission showing compliance with its

Preventative Maintenance Plan. The report shall include a list of inspected circuits and facilities, the condition of facilities according to established rating criteria, schedules established and success at meeting the established schedules.

## **II** Inspection Schedule and Methods:

| SCHEDULE:                          | MONTHLY | ANNUAL | EVERY<br>5 YEARS |
|------------------------------------|---------|--------|------------------|
| Substations Distribution (OH & UG) | X       | X      | X                |

METHODS: Five criteria groups will be used to complete the inspection of all facilities.

- 1. IR infrared thermography used to find poor electrical connections and/or oil flow problems in equipment.
- 2. RFI Radio Frequency Interference, a byproduct of loose hardware and connections, is checked using an AM radio receiver.
- 3. <u>SI</u> structural integrity of all supporting hardware including poles, crossarms, insulators, structures, bases, foundations, buildings, etc.
- 4. <u>Clearance</u> refers to proper spacing of conductors from other objects, trees and conductors.
- <u>5.</u> <u>EC</u> equipment condition on non-structural components such as circuit breakers, transformers, regulators, reclosers, relays, batteries, capacitors, etc.

Distribution facilities will be inspected by substation circuits on a 5 year cycle such that the entire system will be inspected every 5 years. Inspector instructions for inspecting all facilities and forms are included in the plan.

### **III Condition Rating Criteria**

This criterion, as listed below, establishes the condition of a facility and also determines the repair schedule to correct deficiencies.

- 0) Good condition
- 1) Good condition but aging
- 2) Non-critical maintenance required normally repair within 12 months
- 3) Priority maintenance required normally repair within 90 days
- 4) Urgent maintenance required report immediately to the utility and repair normally within 1 week

### IV Corrective Action Schedule

The rating criteria as listed above determine the corrective action schedule.

#### V Record Keeping

All inspection forms and records will be retained for a minimum of 10 years. The inspection form contains all of the required critical information i.e. inspection dates, condition rating, schedule for repair and date of repair completion.

#### VI Reporting Requirements

A report and summary of this plan's progress will be submitted every two years with the first report due to the Commission by February 1, 2003. The report will consist of a cover letter documenting the percent of inspections achieved compared to the schedule and the percent of maintenance achieved within the scheduled time allowance.

#### VII Inspected Circuits and Facilities

Circuit # and description

Substation

#2 South Main Substation to E. Chestnut St.

South Main Substation

#6 Sanborn Substation to Lynch St.

Sanborn Substation

#7 Lintner Rd. and Island Dr.

Base load and peaking generation, less than 50 megawatts per unit in size, is typically subject to pre-operational checks, in addition to checks and maintenance during and after periods of operation. Emergency generation is test run and maintained every (type in a period of time not exceeding one month) to confirm its operational readiness. Pardeeville doesn't have a back up generator on site for Electric Outages. In the case of an emergency we have made arrangements with Fabco out of Madison.

They are on call 24 hours a day and they would provide us with truck mounted generators as we need them.

## VIII Scheduling Goals Established and Success of Meeting the Criteria

It was this utility's goal to complete all monthly substation inspections, and to inspect 40% of the distribution system. In addition, we expected to complete all scheduled maintenance resulting from the inspections within the prescribed time periods specified in the rating criteria. On 8-27-98 we had a study conducted by Power System Engineering. Inc. on our Distribution System. \$222,000 was spent on distribution upgrades between Aug. 1998

and Dec. 2001. All of the inspection goals were met or exceeded. Forty percent of the distribution system was inspected. The items found that needed repair were non critical maintenance items. All repairs were made in a timely manner. We replaced 60 poles in the last 3 years, and plan on replacing 10 to 15 per year. We replaced our last PCB contaminated transformer in our distribution system in 2002. During our annual testing at our substations, the South Main Substation was with in the appropriate limits. Sanborn Substation tests indicated that our B and C phase regulators needed to be replaced. We replaced them both with new regulators. The bypass switch on our A phase regulator was bent, we replaced it with a new switch. Our A phase regulator also showed a hot spot on the bushing witch was repaired. A total of \$42,000 was spent on repairs. Both Substations are in good working condition. Our Hydro Generating Plant is functioning properly and is in good working condition. We spent approimately \$14,000 in 2002 setting the Hydro Plant up on full automation.

### IX Facility condition – rating criteria:

During the past two years, 40% of the distribution system was inspected and all Substation inspections were completed on time. The items found requiring maintenance were repaired before they were responsible for any coustomer outages. Storm related coustomer outages have been minimal. Equipment failure didn't account for any outages to residential customers. Most of the system is in excellent condition and is set up on a countinuing maintenance program.